

# User Manual

---

December 2007 Revision 1.2

## Odysse Hardware System



Copyright 2007 Dec.  
All Rights Reserved  
Manual Version 1.2

The information contained in this document is subject to change without notice. We make no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. We shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced or translated to another language without the prior written consent of the manufacturer.

#### **TRADEMARK**

Intel®, Pentium® and MMX are registered trademarks of Intel® Corporation.  
Microsoft® and Windows® are registered trademarks of Microsoft Corporation.  
ELO Touch is the registered trademark of ELO Touch Systems.

## **Safety**

### **IMPORTANT SAFETY INSTRUCTIONS**

1. Read these instructions carefully. Save these instructions for future reference.
2. Follow all warnings and instructions marked on the product.
3. Do not use this product near water.
4. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
5. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
6. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
7. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
8. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

## **FCC**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## **CE Mark**



This device complies with the requirements of the EEC directive 2004/108/EC with regard to "Electromagnetic compatibility" and 2006/95/EC "Low Voltage Directive".

## **Caution on Lithium Batteries**

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

## **LEGISLATION AND WEEE SYMBOL**

**2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.**



The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centres for activation of the treatment, collection, recycling and disposal procedure.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

## Table of Contents

---

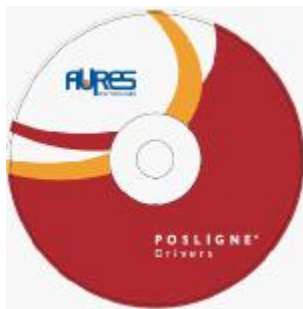
1.	Item Checklist.....	6
1.1.	Standard Items .....	6
1.2.	Optional Items.....	6
2.	System View.....	7
2.1.	Front view .....	7
2.2.	Rear View .....	8
3.	Drivers Installation .....	9
3.1.	Driver List.....	9
3.2.	Chipset Driver Installation .....	9
3.3.	VGA Driver Installation .....	11
3.4.	Audio Driver Installation .....	13
3.5.	LAN Driver Installation .....	14
3.6.	USB2.0 Driver Installation.....	15
3.7.	ELO Touch Screen Driver Installation .....	18
3.8.	POSTouch Touch Screen Driver Installation .....	20
4.	Peripherals Installation .....	23
4.1.	MSR.....	23
4.2.	VFD Customer Display .....	24
4.3.	Compact Flash Card .....	26
5.	System Disassembly .....	27
5.1.	Replace HDD.....	27
5.2.	Install second HDD .....	29
5.3.	Replace I/O Board .....	30
5.4.	Replace CD-ROM.....	31
5.5.	Replace Power Supply .....	32
5.6.	Replace Memory & CPU.....	33
5.7.	Remove Motherboard .....	34
5.8.	Remove the Touch Board .....	37
5.9.	Remove the Inverter Board.....	38
5.10.	Remove the Touch Panel .....	39
6.	Jumper Settings.....	40
7.	Connectors .....	45
8.	Default BIOS Settings.....	47
9.	BIOS Updating Procedure .....	50
10.	Troubleshooting.....	51
	Appendix A: Specification .....	57

# 1. Item Checklist

---

Take the system unit out of the carton. Remove the unit from the carton by holding it by the foam inserts. The following contents should be found in the carton:

## 1.1. Standard Items



a. Driver CD



b. Power Cord

## 1.2. Optional Items



a. Card Reader (MSR)

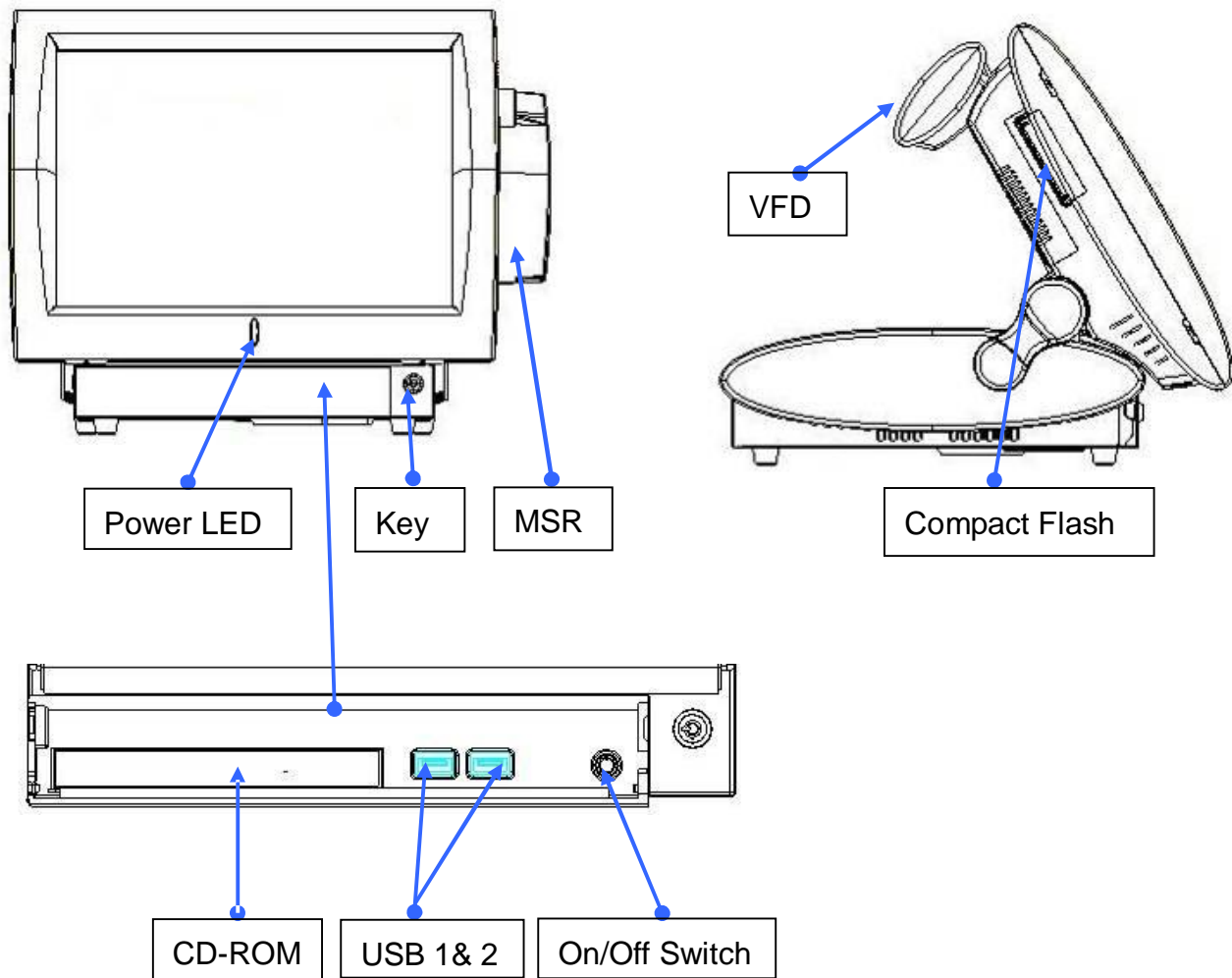


b. Customer Display (VFD)

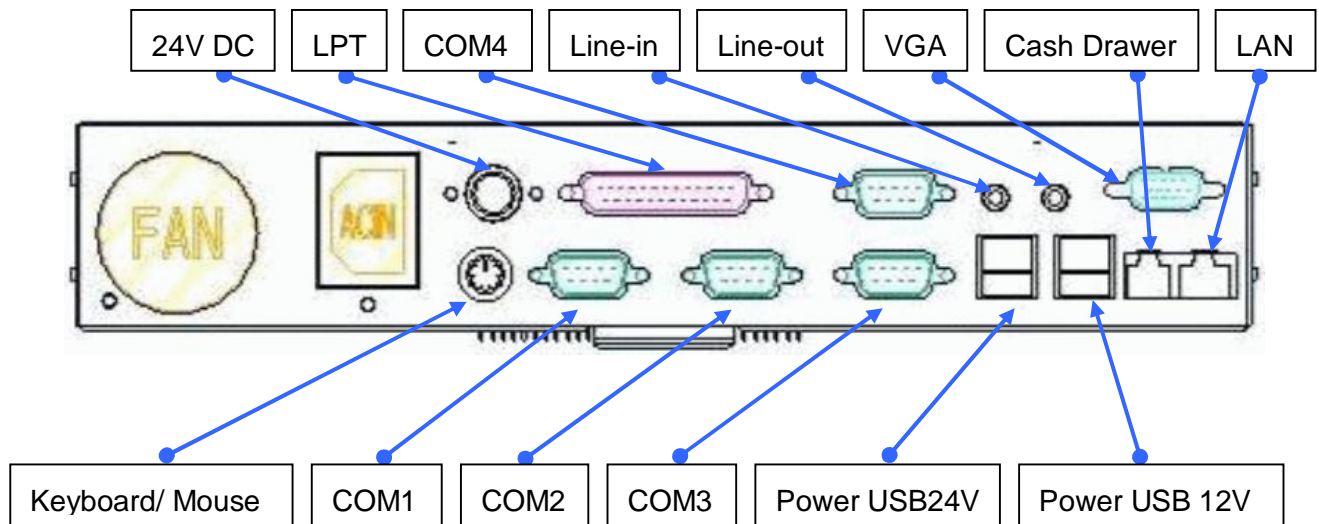
## 2. System View

---

### 2.1. Front view



## 2.2. Rear View





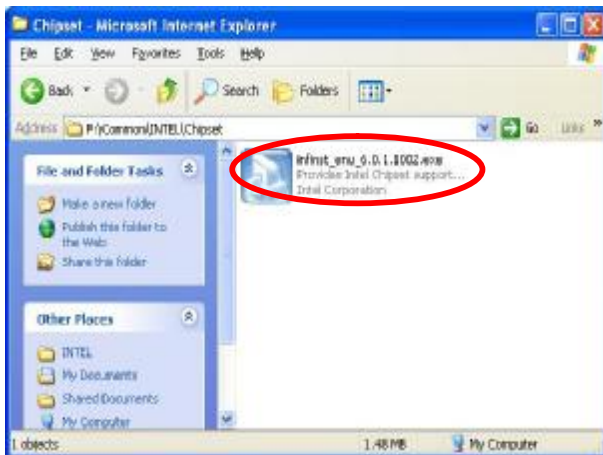
### 3. Drivers Installation

#### 3.1. Driver List

Folder/File	File Description
<CD>:\Odysse.htm	Odysse Driver List
<CD>:\Common\INTEL\Chipset	Chipset Driver
<CD>:\Common\INTEL\VGA\i85x	VGA Driver
<CD>:\Common\Ac97_codec\Realtek\ALC202A	Audio Driver
<CD>:\Common\Lan_driver\R8139_810x	10/100Mb LAN Driver
<CD>:\Common\INTEL\USB20	USB 2.0 Driver
<CD>:\Common\Elo_Touch	ELO Touch Screen Driver
<CD>:\Common\POS_Touch	POSTouch Touch Screen Driver

The following procedures are for Windows 2000/XP, other platforms are similar.

#### 3.2. Chipset Driver Installation



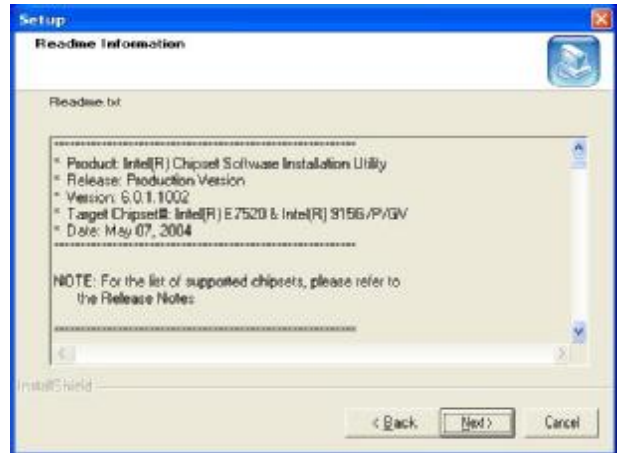
- a. Double click the “infinst\_enu\_6.0.1002” on the “My Computer” window.



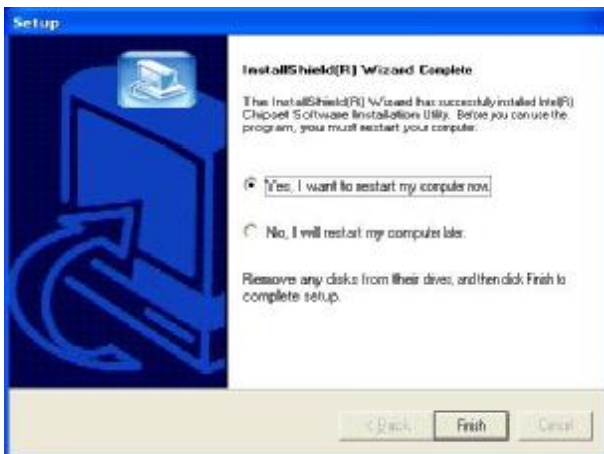
- b. Click the “Next” button on the “Welcome” window.



- c. Click the “Yes” button on the “License Agreement” window.

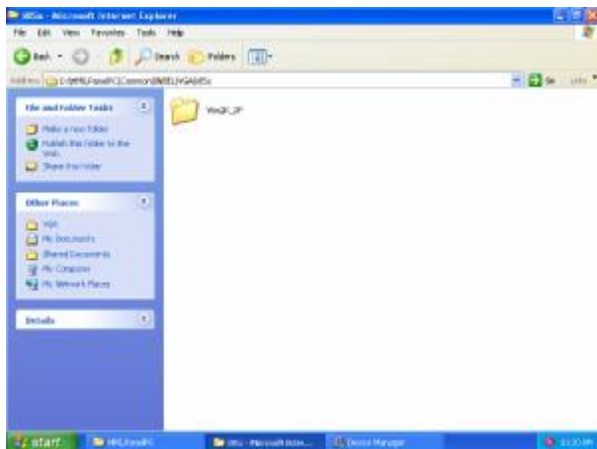


- d. Click the “Next” button on the “Readme Information” window.

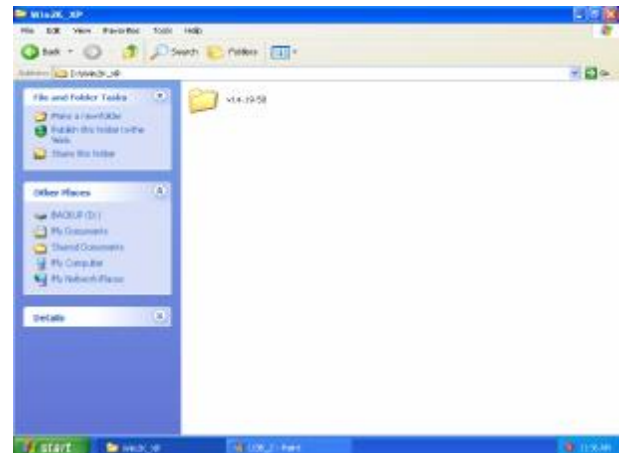


- e. Click the “Finish” button and restart your system.

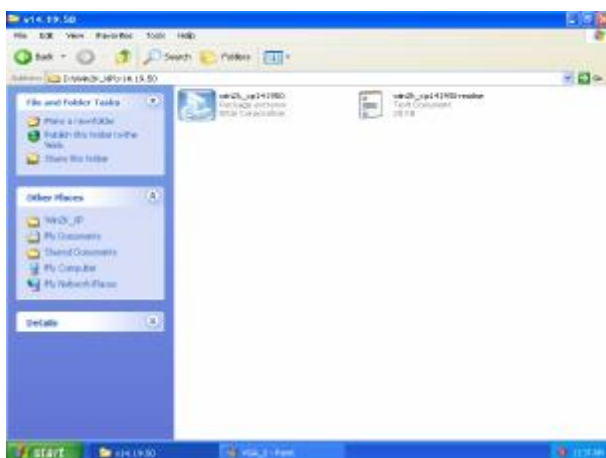
### 3.3. VGA Driver Installation



a. Click the “Win2K\_XP” on the My Computer window.



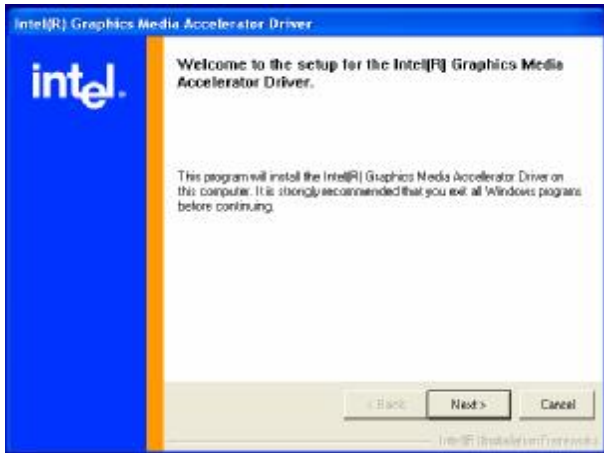
b. Click the “v14.19.50” on the My Computer window.



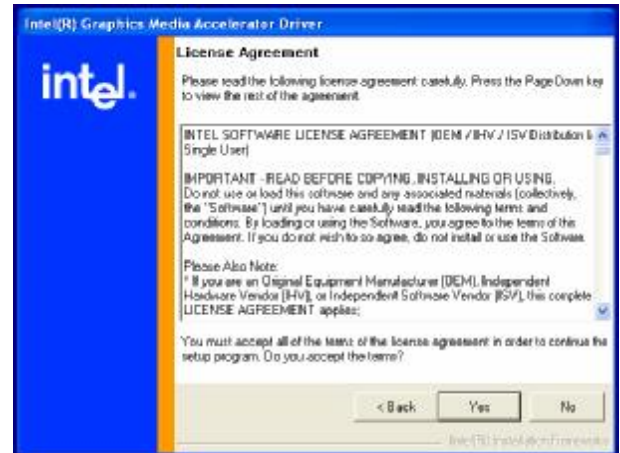
c. Select “win2k\_xp141950” on the v14.19.50 window.



d. Click the “Next” button on the Intel(R) Chipset Graphics Driver Software-InstallShield(R) Wizard window.



- e. Click the “Next” button on the Intel(R) Graphics Media Accelerator Driver window.

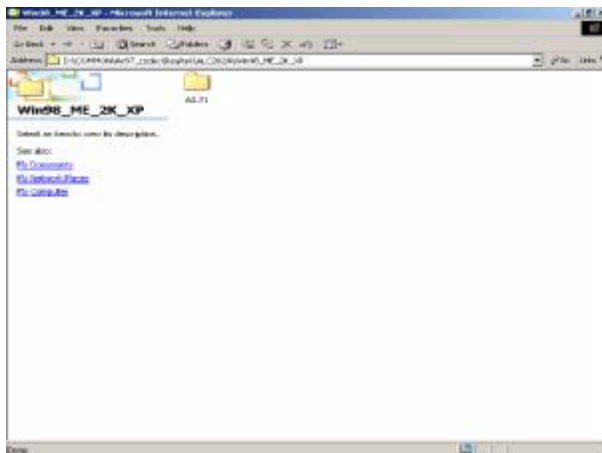


- f. Click the “Yes” button on the Intel(R) Graphics Media Accelerator Driver window.

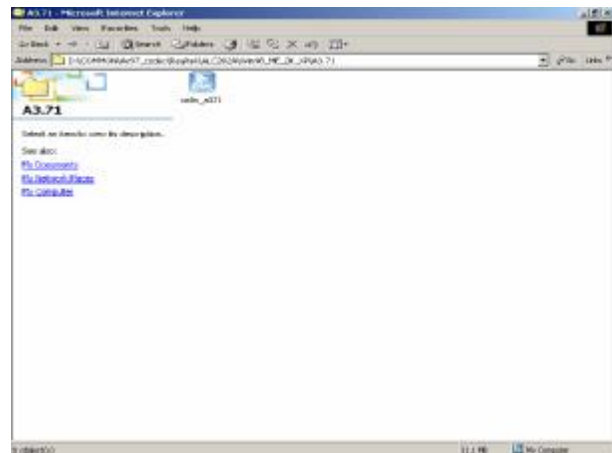


- g. Select “Yes, I want to restart my computer now” and click the “Finish” button on the Intel(R) Graphics Media Accelerator Driver window.

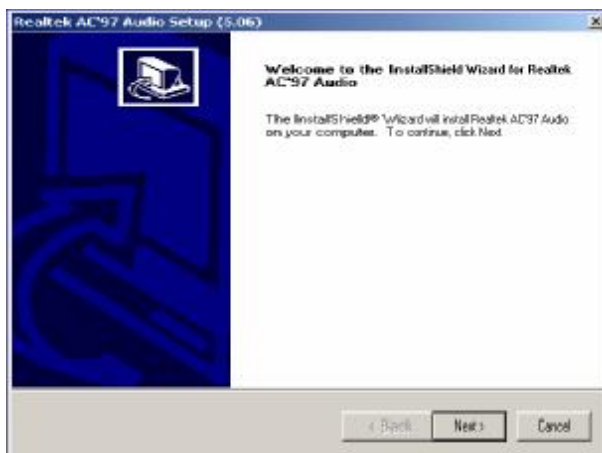
### 3.4. Audio Driver Installation



a. Click “A3.71” on the My Computer window.



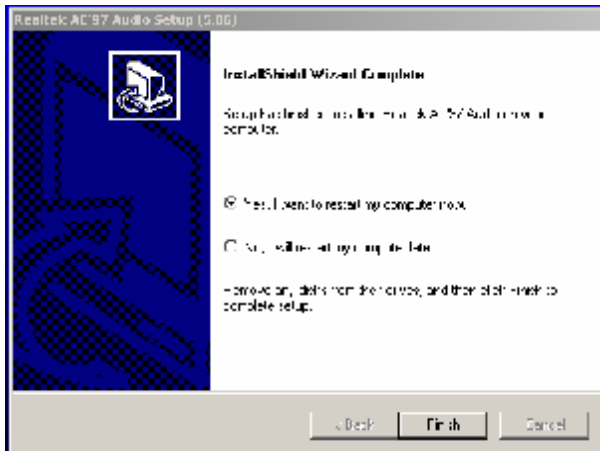
b. Double click “wdm\_a371” on the My Computer window.



c. Click “Next” button on the Realtek AC'97 Audio Setup window.

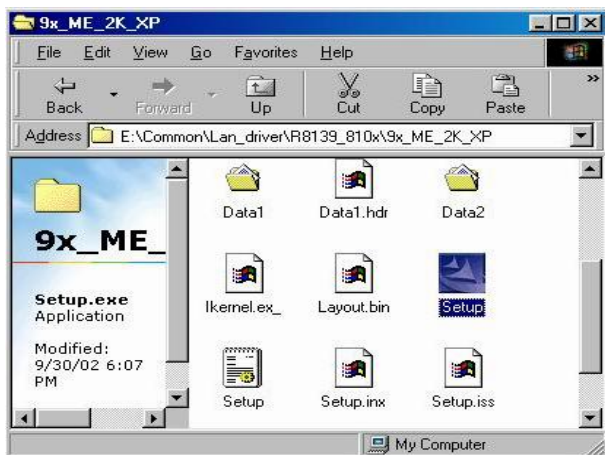


d. Click “Yes” button on the Digital Signature Not Found window.

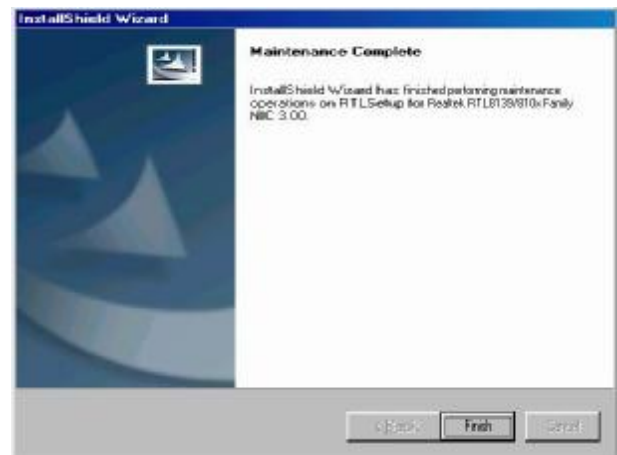


- e. Click “Finish” button on the Realtek AC'97 Audio Setup window.

### 3.5. LAN Driver Installation

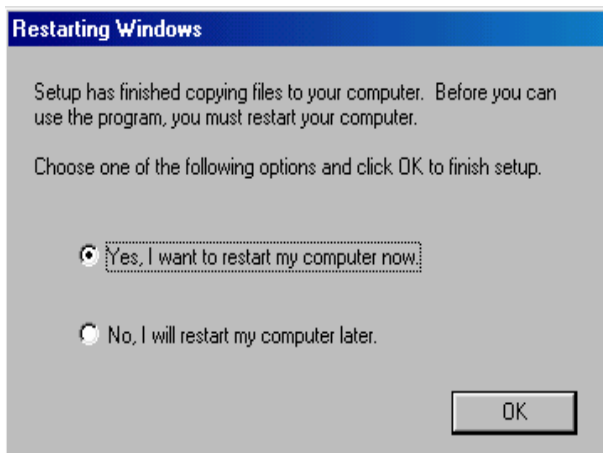


- a. Double click the "Setup" on the "My Computer" window.



- b. Click the “Finish” button on the “Maintenance complete” window.



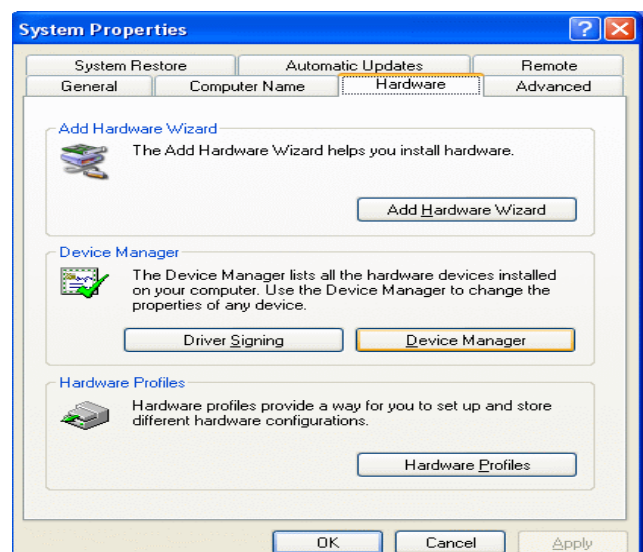


- c. Click the “OK” button and restart your system.

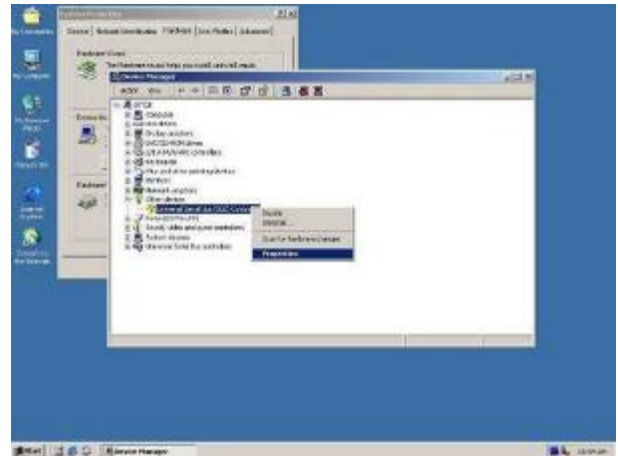
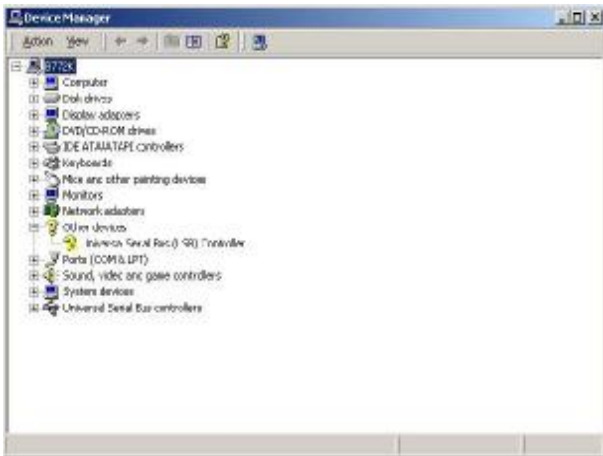
### 3.6. USB2.0 Driver Installation



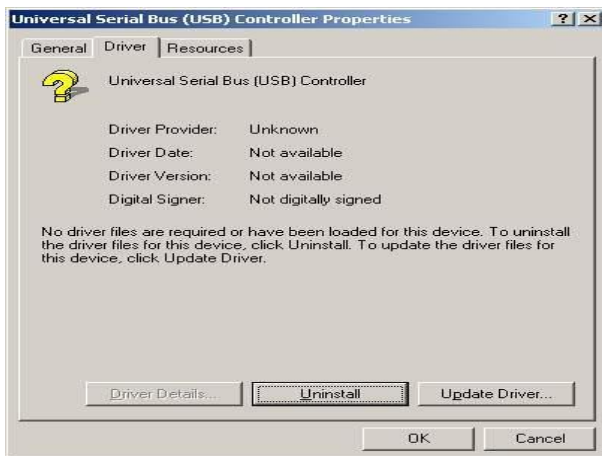
- a. Right click the “My Computer” on the windows and select “properties”.



- b. Select “Hardware” à ”Device Manager” on system properties.



c. Select "Other Devices" à "Universal Serial Bus (USB) Controller" à "Properties" in the Device Manager.



d. Select "Device" à "Update Driver..."

e. Click the "Next" button on the "Welcome" window.



f. Select "Search for a suitable..." and click the "Next" button on the "Install Hardware Device Drivers" window.

g. Select "Specify a location" and click the "Next" button on the "Locate Driver Files" window.





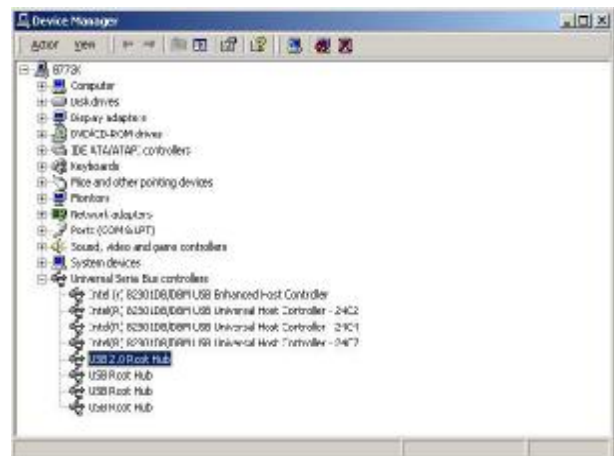
h. Press “Browse” to select driver and then click the “OK” button to next page.



i. Click the “Next” button on “Driver Files Search Results” window.



j. Click the “Finish” button to complete this process.



k. Finished.

### 3.7. ELO Touch Screen Driver Installation



- a. Click "sw500930" on the My computer window.



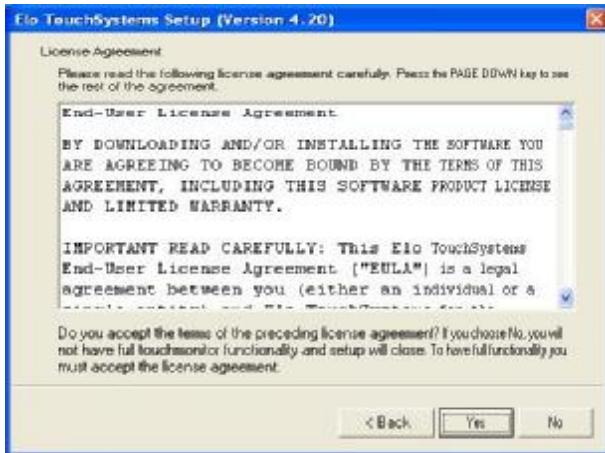
- b. Click the "OK" button on the Welcome window.



- c. Click the "Unzip" button on the WinZip Self-Extractor window.



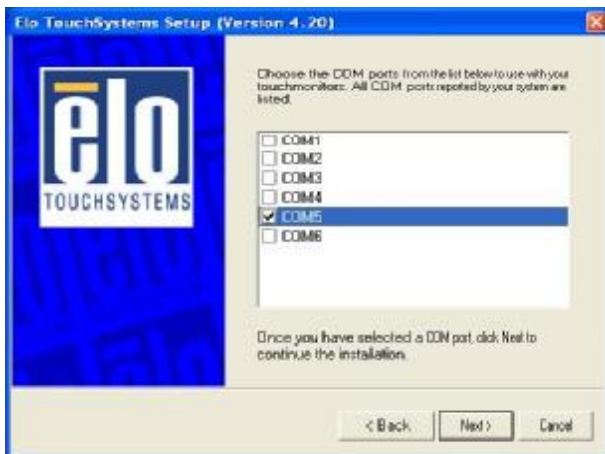
- d. Select "Install Serial Touchscreen Drivers" and then click the "Next" button on the Welcome window.



e. Click the “Yes” button on the License Agreement window.



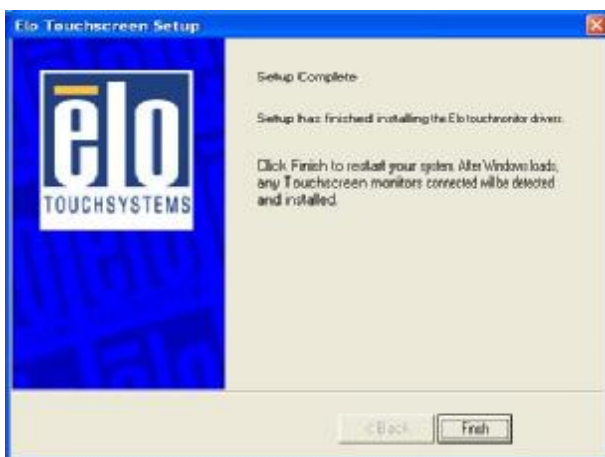
f. Click the “Next” button on the on the “Select the COM ports...” window.



g. Select “COM5” and click the “Next” button on the Choose the COM ports... window.



h. Click the “Next” button on the You have selected the COM ports...window.



i. Click the “Finish” button on the Setup Complete window



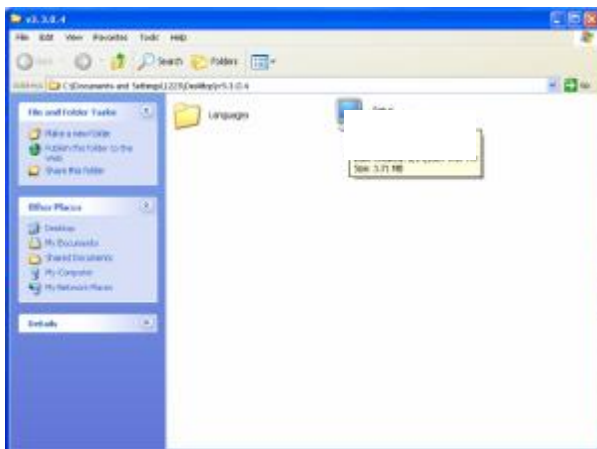
j. Click the “Yes” button and restart your system.



k. After the computer has restarted, click "Align" on the Elo Touchscreen Properties window.

l. Follow the instructions on the screen to calibrate the touch panel.

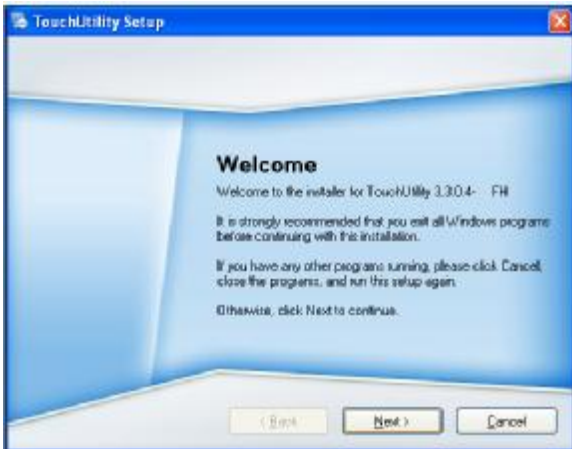
### 3.8. POSTouch Touch Screen Driver Installation



a. Double click the "Setup" on the "My Computer" window.



b. Click the "Next" button on the "Welcome window".



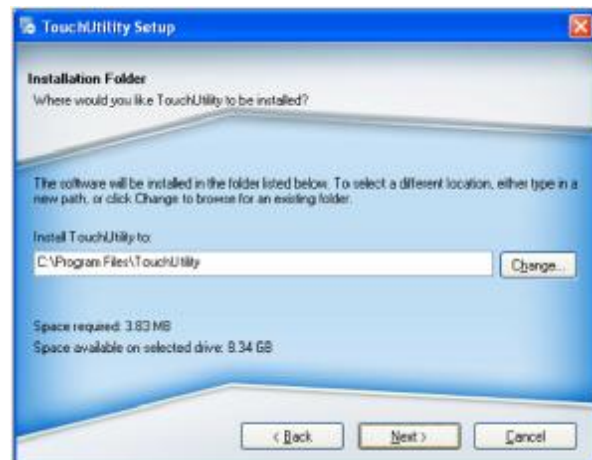
c. Click the "next" button on the "Wellcome" window.



d. Select "Install the software automatically" and click the "Next" button on the "URTC1000" window



e. Click the "Next" button on the "License Agreement" window.



f. Click the "Next" button on the "Install Folder" window.

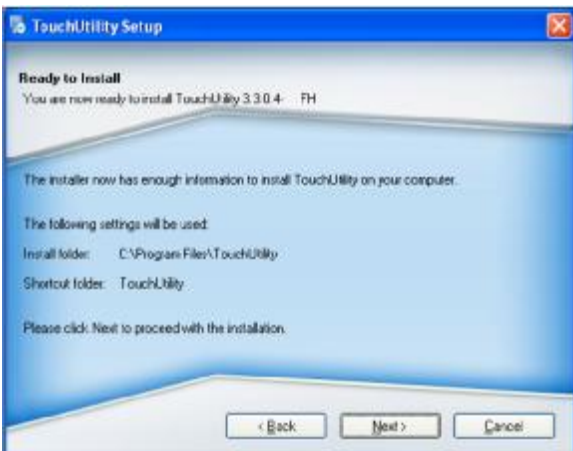




g. Click the “Next “ button on the “Shortcut Folder” window.



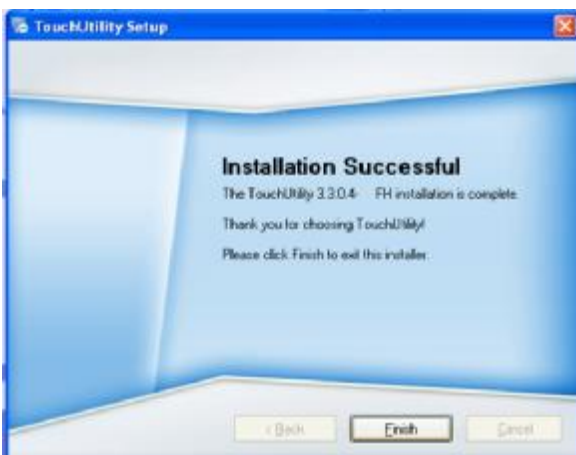
h. Select the “USB” and click the ”Next” button on the “Options” window.



i. Click the :Next” button on the “Ready to Install” window



j. Click the “Continue Anyway” button on the URTC-1000 window



k. Click the “Finish” button on the “Installation Successful” window .



l. Click the “OK” button to reboot your computer

## 4. Peripherals Installation

---

The MSR and VFD customer display are tested and can be supplied at your request. The MSR and VFD customer display are packed separately for transportation and can be installed by the user.

### 4.1. MSR



a. Remove the screws (2) of the MSR dummy door.



b. Slide the MSR dummy door out as shown in the picture.



c. Slide the MSR into position.



d. Fasten it to the display housing by tightening the screws (2).

## 4.2. VFD Customer Display



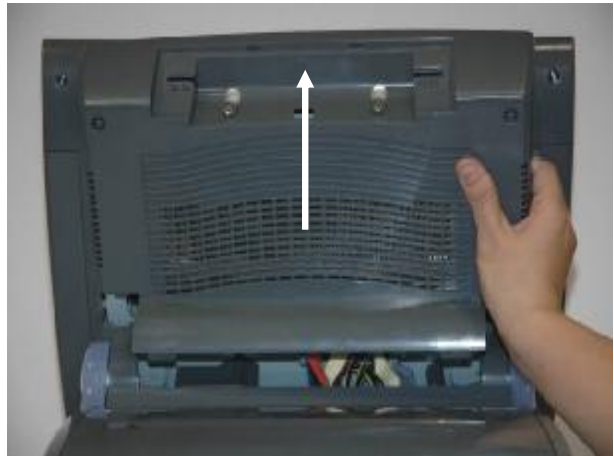
a. Remove the screws (2) of the VFD dummy door.



b. Slide the VFD dummy door out.



c. Remove the screws (2) of the CPU RAM door.



d. Slide the CPU RAM door out.



e. Pass the VFD cable through the hole as shown in the picture.



f. Click both sides of the VFD assembly into the position as shown in the picture.





g. Turn the assembly over and fix the MSR to the CPU RAM door with the four screws (4) supplied with the MSR.



h. Connect the VFD cable to the connector as shown.



i. Slide the CPU ram door into position.



j. Fasten the CPU ram door to the LCD housing by tightening the screws (2).

### 4.3. Compact Flash Card



a. Open the compact flash card cover.



b. Insert the compact flash card with the label facing up into the compact flash card slot.

Note: Power must be off when installing the compact flash card.

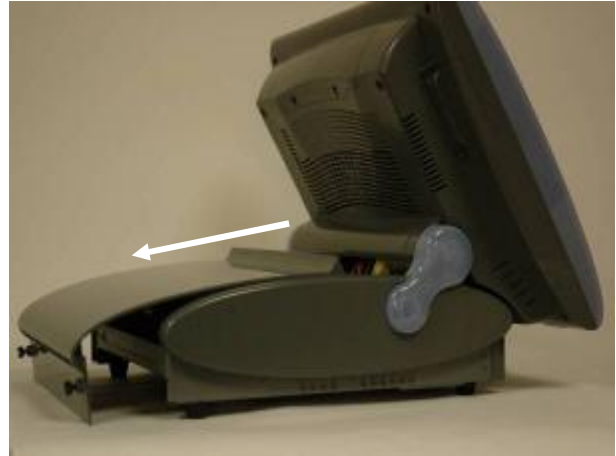
## 5. System Disassembly

---

### 5.1. Replace HDD



a. Loosen the screws (2) that secure the base rear cover.



b. Slide the base rear cover toward the back of the terminal.



c. Remove the screws (2).



d. Pull the base cover bracket towards you by the handle, and lift it up.



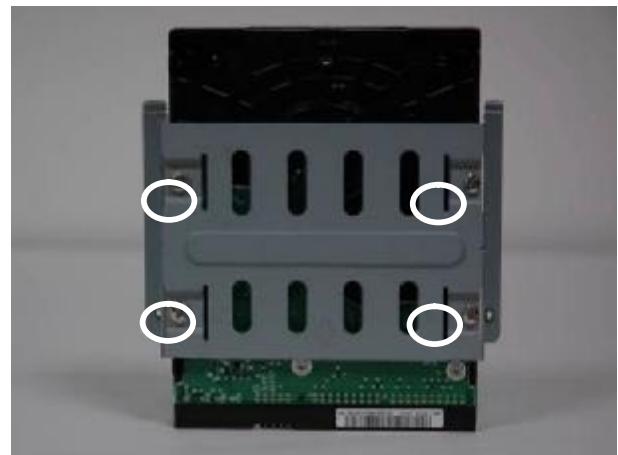
e. Disconnect the IDE and power cables.



f. Lift the base cover bracket to disengage it from the base chassis. Remove the screws (2).



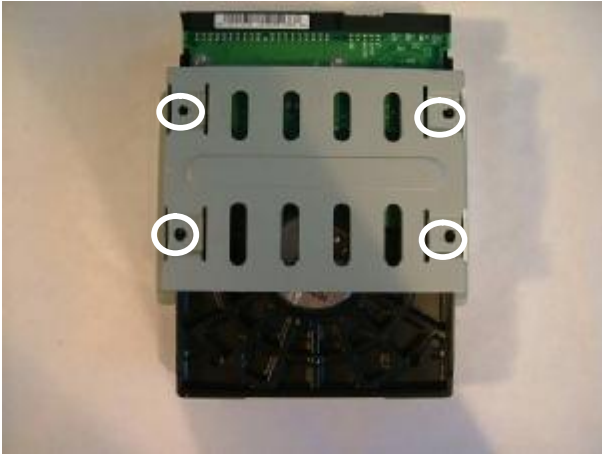
g. Turn over the base cover bracket to access the HDD bracket.



h. Remove the screws (4) to separate the HDD bracket from the HDD.

## 5.2. Install second HDD

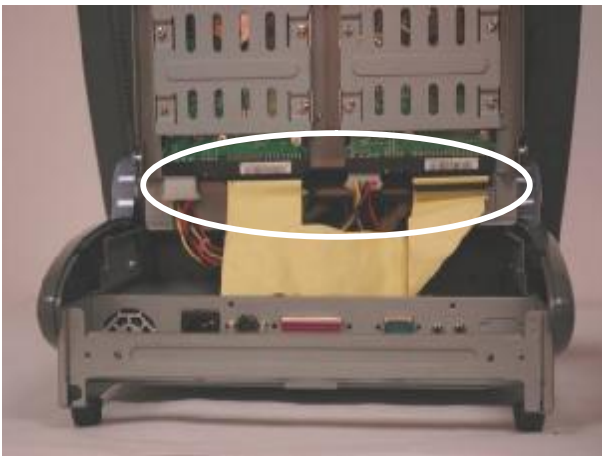
Follow the instructions in chapter 5.1, items a. to e. to open the system remove the base cover bracket.



a. Tighten the screws (4) to assemble the HDD and the HDD bracket.



b. Install the second HDD in its location and secure it with the screws (2).



c. Connect the IDE cables (2) and the power cables (2) of both HDD.



### 5.3. Replace I/O Board

The I/O board is located at the base chassis. It is necessary to remove the base cover bracket as described in chapter 5.1.



a. Disconnect the cables (3) including power cable, IDE cable and 100 pin cable.



b. Remove the screws (2) of the 24V DC port and remove the screws (2) of the line-in and line-out.



c. Remove the 3/16 Hex Screws (10) that secure the board.



d. Remove the screws (4) to replace the I/O board.

## 5.4. Replace CD-ROM

The CD-ROM is located in the base chassis.



a. Remove the back cover screw (1) at the bottom of terminal.



b. Open the base door.



c. Use a screwdriver to remove the CD-ROM.



d. Remove the CD-ROM and replace it.

## 5.5. Replace Power Supply

The power supply is located in the base chassis. It is necessary to remove the base cover bracket first as described in chapter 5.1.



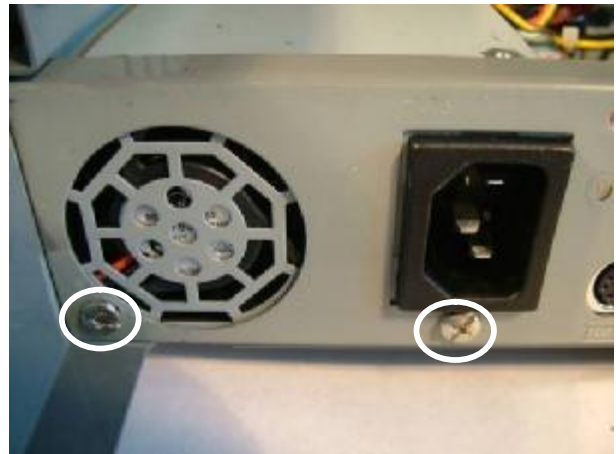
a. Remove the screws (2) to take the CPU ram door out.



b. Disconnect the 20pin cable (1).



c. Remove the back cover screw (1) at the bottom of terminal.



d. Remove the screws (2) to replace the power supply.



## 5.6. Replace Memory & CPU



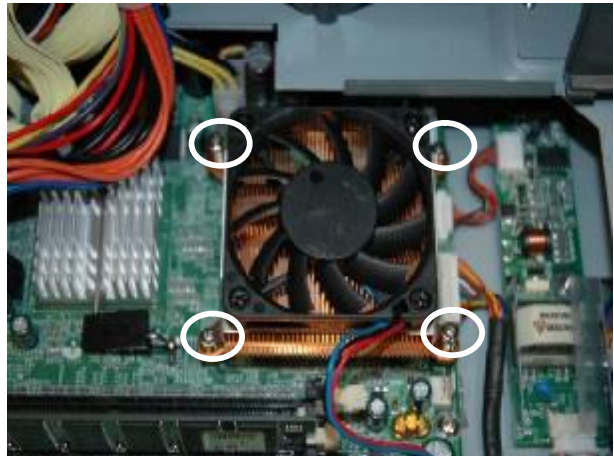
a. Remove the screws (2) to take the CPU ram door out.



b. The memory slots are located on the mainboard. To remove the memory module, use your finger to push the DIMM slot ejector clips into the down position. Remove the memory module from the slot.



c. Disconnect the fan cable.



d. Remove the screws (4) to remove the heatsink and the fan.



- e. To remove the CPU, push the CPU socket lever down and away from the socket, and lift it up.

## 5.7. Remove Motherboard

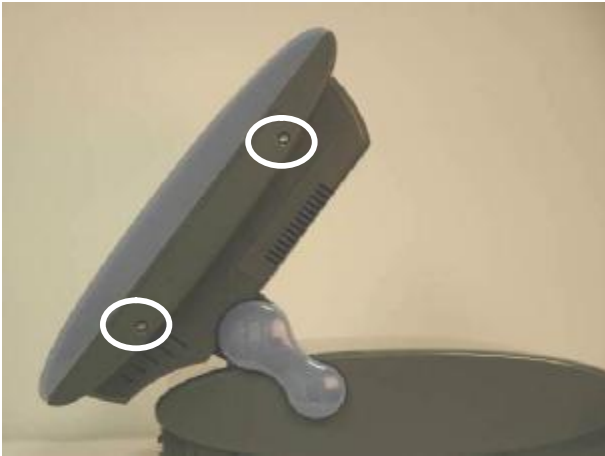
Follow the instructions in chapter 5.6.first and remove the CPU.



- a. Disconnect the following cables (8):  
20pin cable, 100pin cable, IDE1 cable,  
IDE2 cable, USB3&4 cable, MIC&Line-in  
cable, speaker cable and CPU power  
cable. (Refer to Chapter 7).



- b. Open the compact flash card cover.  
Remove the screw (1).



c. Remove the screws (2) of the MSR.



d. Remove the screw (1).



e. Remove the screws (2).



f. Remove the screws (2).



g. Use your hands to carefully press in the two sides to separate the LCD chassis from the base (including LCD cover).







h. Remove the screw (1) of the touch board.



i. Disconnect the cables (2) of the touch board.



j. Disconnect the cables (2) of the inverter board.



k. Remove the screws (6) to remove the motherboard.

## 5.8. Remove the Touch Board

Follow the instructions in chapter 5.7. items a. to g. to remove the base and LCD cover.



a. Disconnect the cable (1) of the touch board.



b. Disconnect the 5-wire resistive cable (1).



c. Remove the screws (2) to remove the touch board.

## 5.9. Remove the Inverter Board

Follow the instructions in chapter 5.7. items a. to g. to remove the base and LCD cover.



a. Disconnect the cables (2).



b. Disconnect the backlight cables (2).



c. Remove the screws (2) to remove the inverter board.



## 5.10. Remove the Touch Panel

Follow the instructions in chapter 5.7. items a. to g. to remove the base and LCD cover.



a. Disconnect the cable (1) of the MSR connect board.



b. Remove the screws (2).



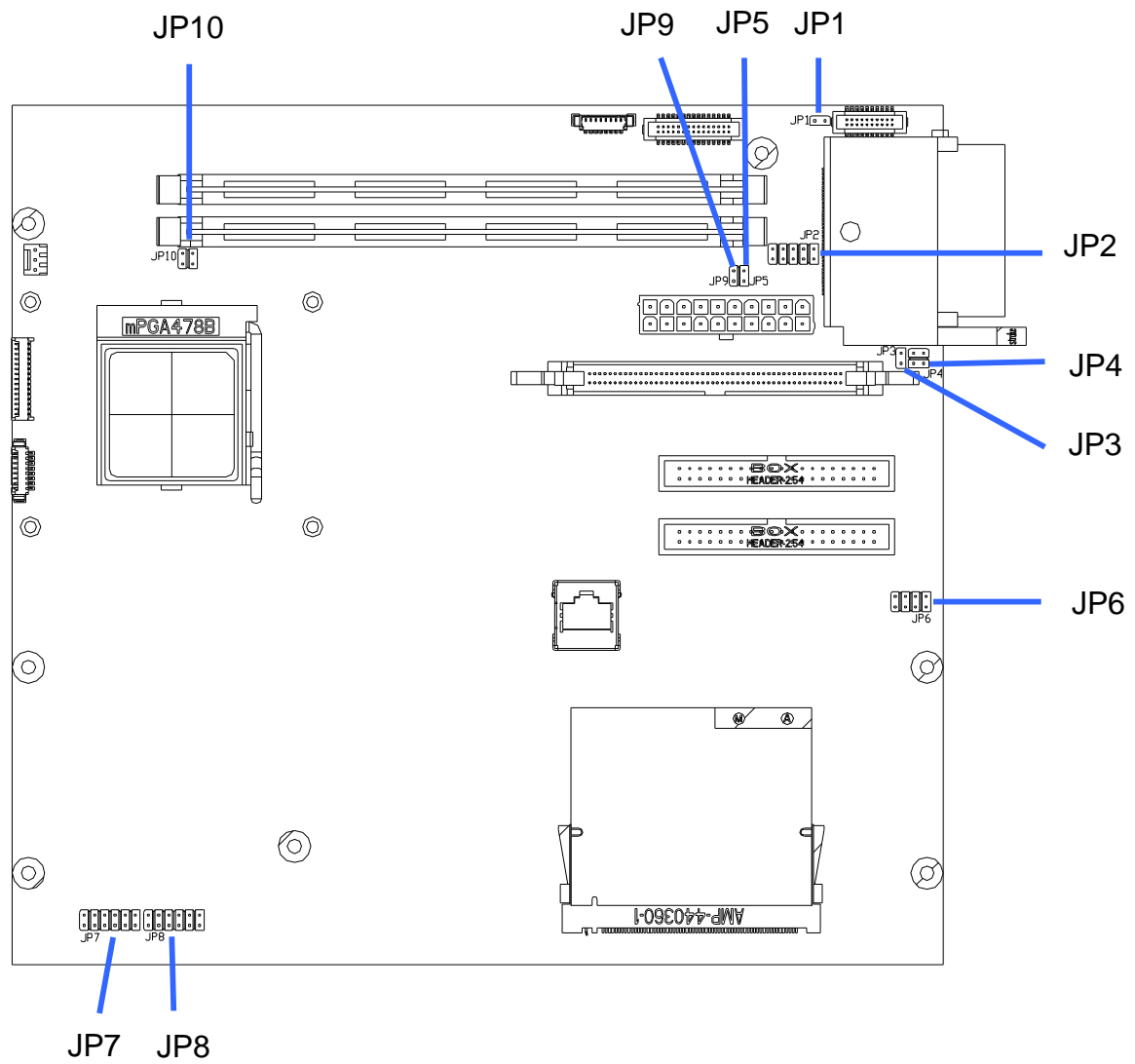
c. Remove the screws (5) that secure the LCD chassis. Then, remove the LCD chassis.



d. Remove the screws (12) to remove the touch panel.

## 6. Jumper Settings

### Main Board





## Jumper Settings for Main Board

### 1. Compact Flash Master/Slave Setting ◎ Factory Default Setting

Function	JP1 (SHORT)
Master	◎1-2
Slave	NC

### 2. ACPI Mode Setting

Function	JP3 (SHORT)
Disable	◎1-2
Enable	NC

### 3. I-Button Setting

Function	JP4 (SHORT)
Use I-Button	NC
No I-Button	◎1-2    3-4

### 4. CMOS Operation Mode Setting

Function	JP5 (SHORT)
CMOS Normal	◎NC
CMOS Reset	1-2

To clear the CMOS:

- 1) Remove AC power from the unit.
- 2) Open the cabinet.
- 3) Change the JP5 jumper setting from N/C to 1-2.
- 4) Wait 1 minute.
- 5) Change the JP5 jumper setting back to N/C.
- 6) Close the cabinet.
- 7) Apply AC power and continue.

### 5. Power Mode Setting

Function	JP9 (SHORT)
ATX	◎NC
AT	1-2

## 6. CPU Frequency Setting

Function	JP10 (SHORT)
FSB 400	1-2,3-4
FSB 533	3-4

## 7. CPU Voltage Setting

CPU Type	JP7 (SHORT)	JP8 (SHORT)
P4-M (1.3V) PERF Mode	NC	3-4, 1-2 (NC) 9-10, 5-6 (NC) 7-8 (NC) 11-12 (NC)
©P4, Celeron	1-2, 3-4 5-6, 7-8 9-10, 11-12	NC

## 8. LCD ID Setting

Panel Number	Resolution	LVDS		JP6			
		Bits	Channel	1-2	3-4	5-6	7-8
0	640 x 480	18	Single	SHORT	SHORT	SHORT	SHORT
1	800 x 600	18	Single	SHORT	SHORT	SHORT	OPEN
2	1024 x 768	18	Single	SHORT	SHORT	OPEN	SHORT
3	1280 x 1024	24	Dual	SHORT	SHORT	OPEN	OPEN
4	1024 x 768	24	Single	SHORT	OPEN	SHORT	SHORT
5	800 x 600	24	Single	SHORT	OPEN	SHORT	OPEN

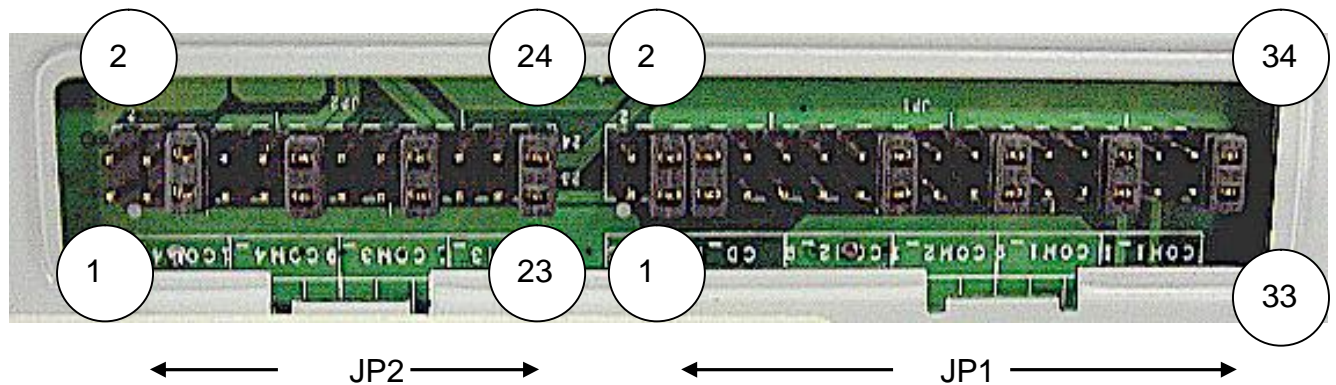
Note:

OPEN 

SHORT 

## Jumper Setting for I/O Board

JP1 and JP2 control how the COM port connectors are configured. These jumpers are located on the bottom of the I/O Connector Board and can be accessed without terminal disassembly. Tilt the terminal and Replace the Jumper Cover Plate (1 screw) on the bottom of the terminal to gain access to the jumpers.



### 1. COM1/COM2/Cash Drawer DC Power Jumper Setting: JP1 (SHORT)

Cash Drawer					COM2						COM1					
1-2	3-4	5-6	7-8	9-10	11-1	13-1	15-1	17-1	19-2	21-2	23-2	25-2	27-2	29-3	31-3	33-3
					2	4	6	8	0	2	4	6	8	0	2	4
NC	+24 V ⊙	+24 V ⊙	+12 V	+12 V	+12 V	+5V	RI ⊙	+12 V	+5V	DCD ⊙	+12 V	+5V	RI ⊙	+12 V	+5V	DCD ⊙
					PIN9			PIN1			PIN9			PIN1		

⊙Factory Default Setting

### 2. COM3/COM4 DC Power Jumper Setting: JP2 (SHORT)

COM4						COM3					
1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24
+12V	+5V	RI ⊙	+12V	+5V	DCD ⊙	+12V	+5V	RI ⊙	+12V	+5V	DCD ⊙
PIN9			PIN1			PIN9			PIN1		

⊙Factory Default Setting

### 3. USB DC Power Jumper Setting: JP3/JP4 (SHORT)

JP3 (SHORT)		JP4 (SHORT)	
1-2	3-4	1-2	3-4
+24V	⊙+12V	⊙+24V	+12V

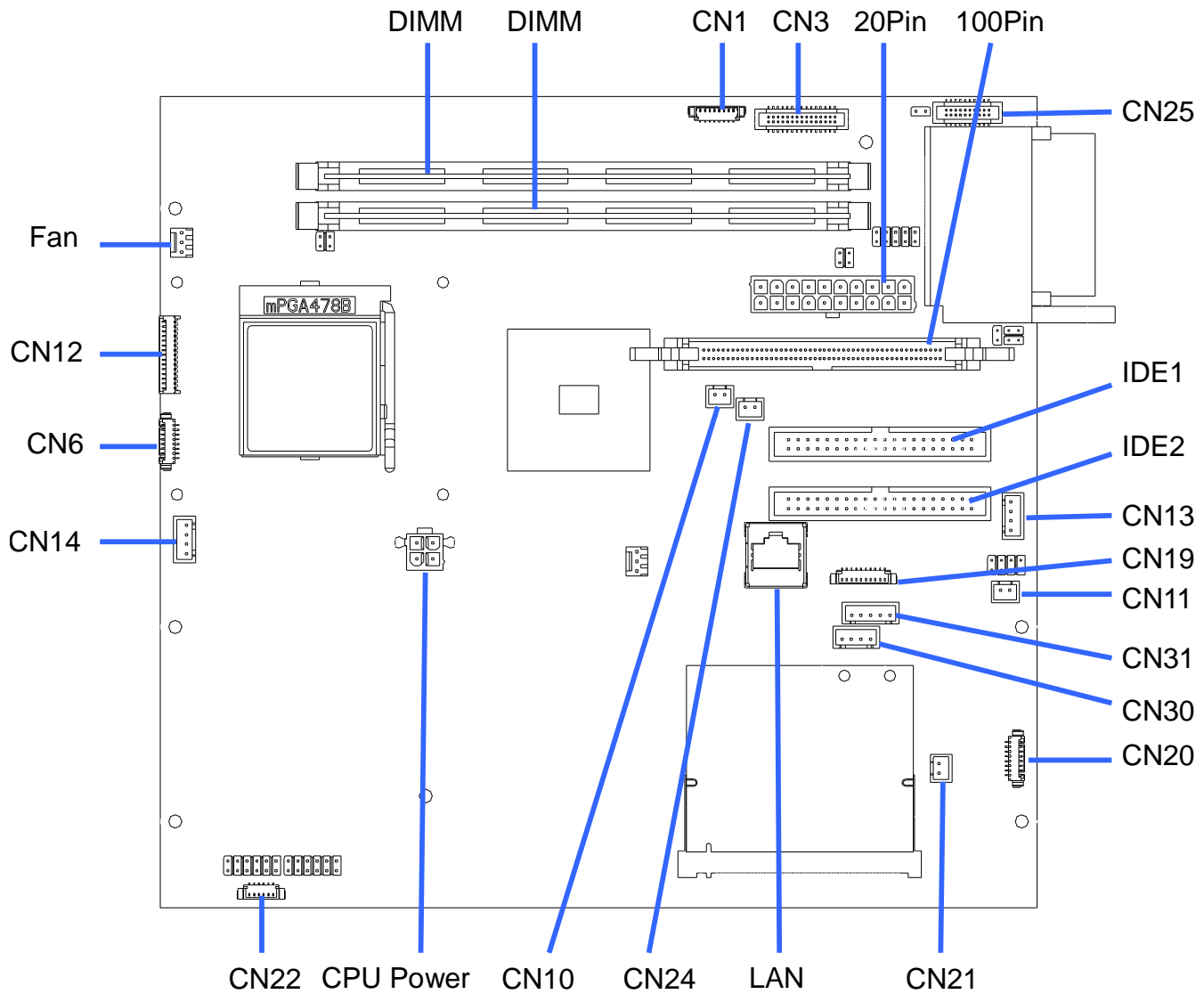
⊙Factory Default Setting

Note:



## 7. Connectors

---



Connector	Function
CN1	COM5 for Touch
CN3	Single Channel LCD Interface
CN6	Inverter Power
CN10	IDE ACT LED
CN11	Power Switch
CN12	15" POS Card Reader CONN
CN13	USB6
CN14	USB5
CN19	USB3, USB4
CN20	I-Button
CN21	Hardware Reset
CN22	XC9536 Modify Port
CN24	Power LED CONN
CN25	Dual Channel LCD Interface
CN30	Speaker
CN31	MIC & Line-in

## 8. Default BIOS Settings

---

### 1. BIOS Setup Utility

The BIOS setup defines how the system is configured. You need to run this program the first time you configure this product. You may need to run it again if you change the configuration.

You need to connect a PC keyboard to the keyboard connector to run the BIOS setup utility.

### 2. Starting the BIOS Setup

1. Turn on or reboot this product.
2. Press the DEL key immediately after the product is turned on, or press the DEL key when the following message is displayed during POST (the Power on Self-Test).

***Press DEL to enter SETUP.***

3. The main menu of the BIOS setup is displayed.
4. If the supervisor password is set, you must enter it here.

### 3. When a Problem Occurs

If, after making and saving system changes with the Setup utility, you find that this product no longer boots, start the BIOS setup and execute the following.

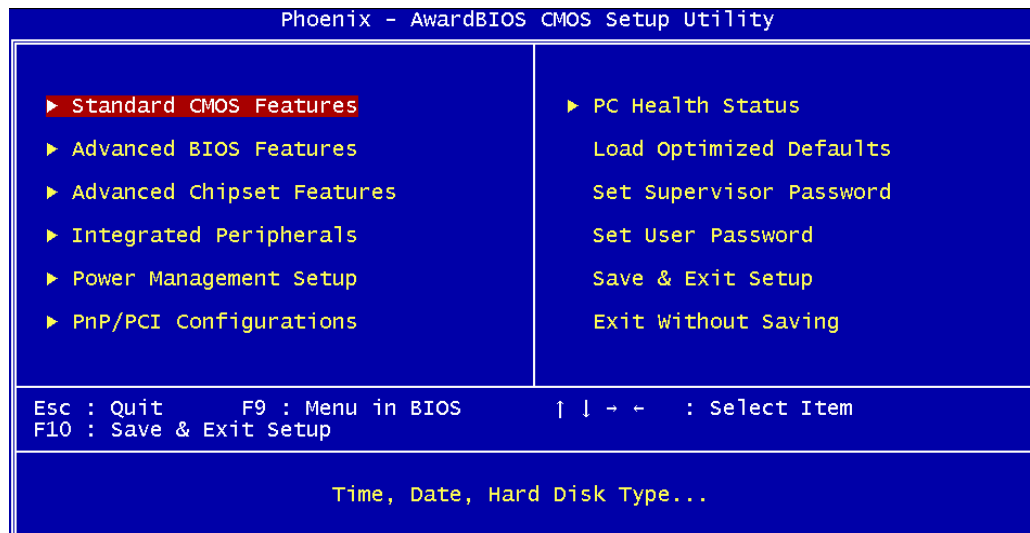
***Load Optimized Defaults***



## 4. BIOS Main Menu

When the BIOS Main Menu is displayed, the following items can be selected. Use the arrow keys to select items and the Enter key to accept and enter the sub-menu.

Note: The BIOS menu below is from B82 BIOS version B82FV10B.BIN. If you have a different BIOS version, the contents of the menu may differ.



### Standard CMOS Features

This setup page includes the standard CMOS features.

### Advanced BIOS Features

This setup page includes the enhanced AWARD BIOS features.

### Advanced Chipset Features

This setup page includes the Chipset features

### Integrated Peripherals

Change, set, or disable on board super I/O functions.

### Power Management setup

This category determines the system power consumption of the system.

### **PNP/PCI Configurations**

This category specifies the value (in units of PCI bus clocks) of the latency timer for the PCI bus master and the IRQ level for PCI devices.

### **PC health status**

This page shows hardware monitor information.

### **Load Optimized Defaults**

BIOS defaults indicate the most appropriate value of the system parameters for a standard system performance.

.

### **Set Supervisor Password**

Change, set, or disable the password. It allows the supervisor to change BIOS settings.

### **Set Password**

Change, set, or disable the password. It allows you to limit access to the system and to the setup, or just to the setup.

### **Save & exit setup**

Save CMOS value changes to CMOS and exit setup.

### **Exit without saving**

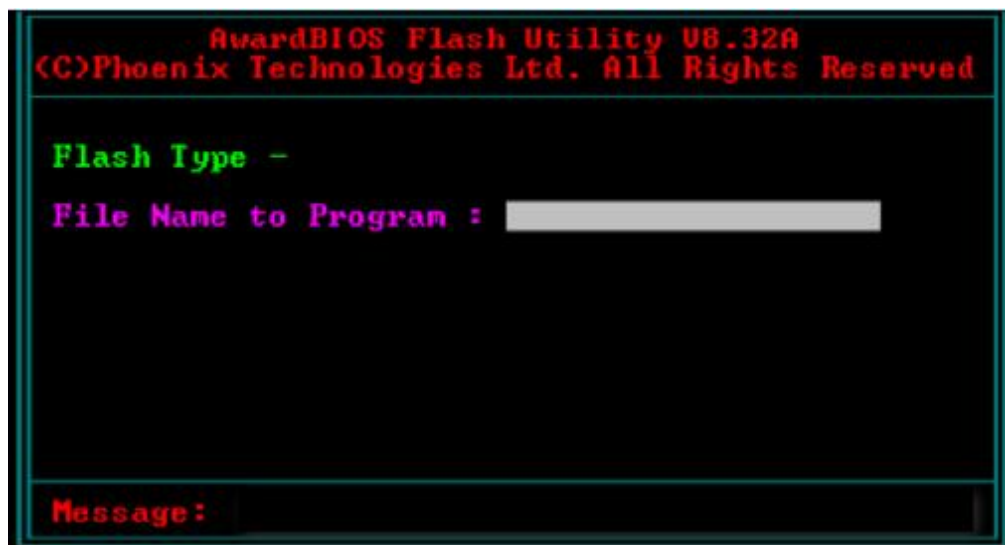
Discard all CMOS value changes and exit setup.

## 9. BIOS Updating Procedure

---

To update the BIOS, you will need the new BIOS file and a flash utility, AF832A.EXE. You can download them from the web site or contact technical support or your sales representative.

1. Prepare one bootable device with DOS OS, save the new BIOS file along with the flash utility AF832A.EXE to this boot device.
2. Reboot the system and enter the Award BIOS Setup Utility to set the first boot drive to your boot device.
3. Save the setting and reboot the system.
4. After the system booted from the boot device, execute the flash utility by typing AF832A.EXE in **DOS prompt**. The following screen will appear.



5. Type the new BIOS file name onto the gray area that is next to “File Name to Program” then press <Enter>.
6. The following will appear.

Do You Want to Save BIOS (Y/N)

This question refers to the current existing BIOS in your system. We recommend that you save the current BIOS and its flash utility; just in case you need to reinstall the BIOS. To save the current BIOS, press <Y> then enter the file name of the current BIOS. Otherwise, press <N>.

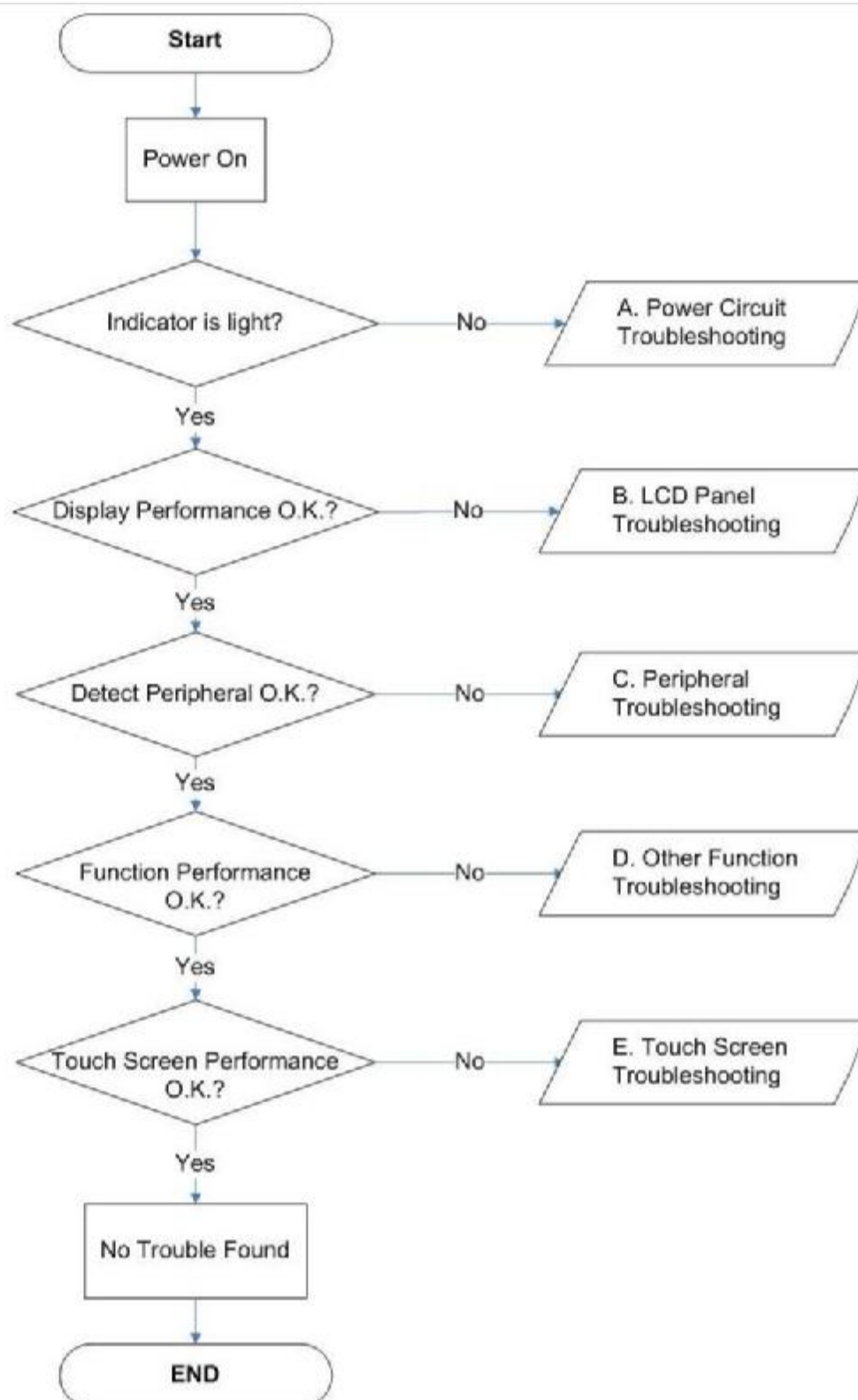
7. The following will then appear.

Press “Y” to Program or “N” to Exit.

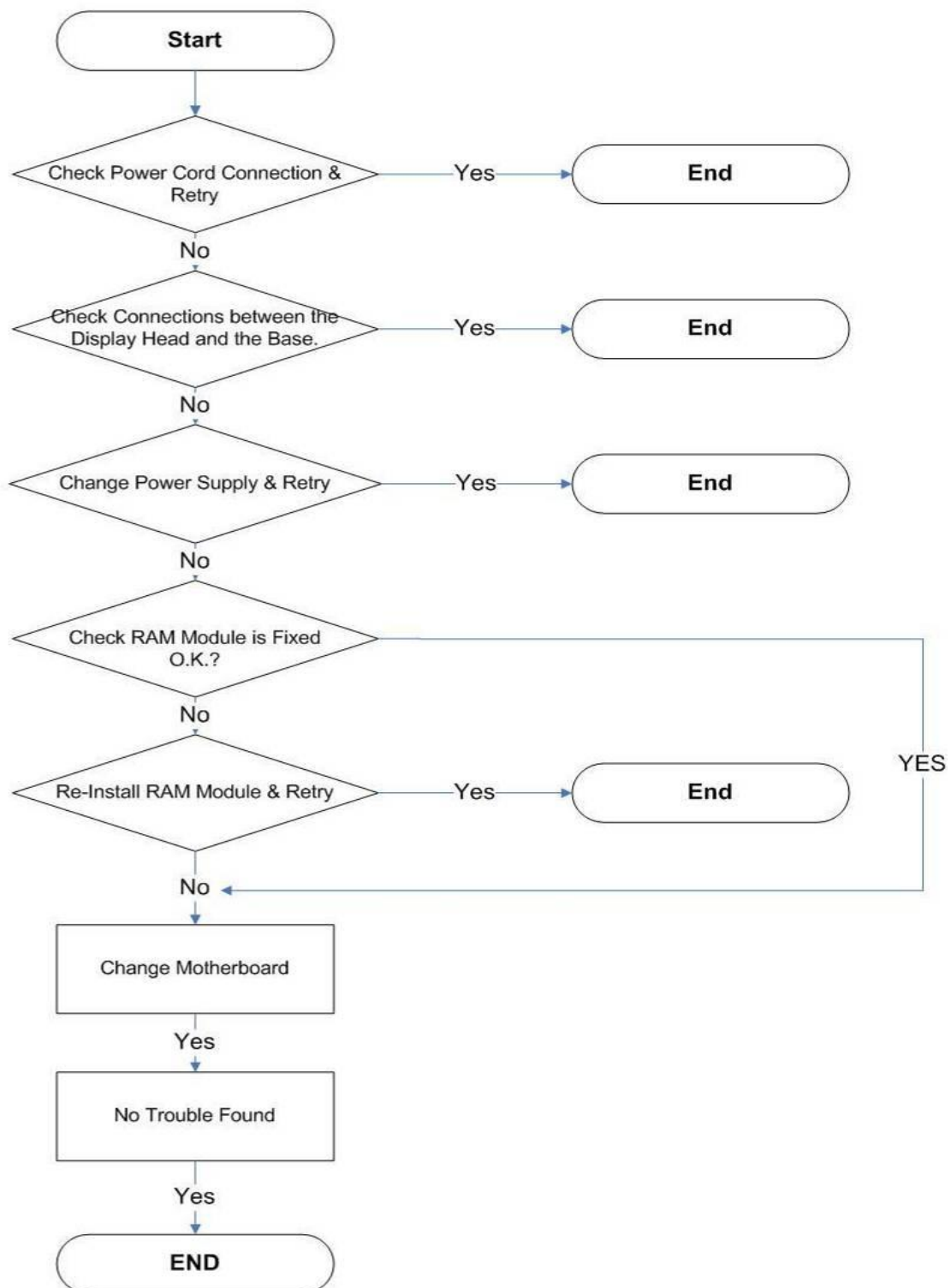
8. Press <Y> to flash the new BIOS.

## 10. Troubleshooting

---

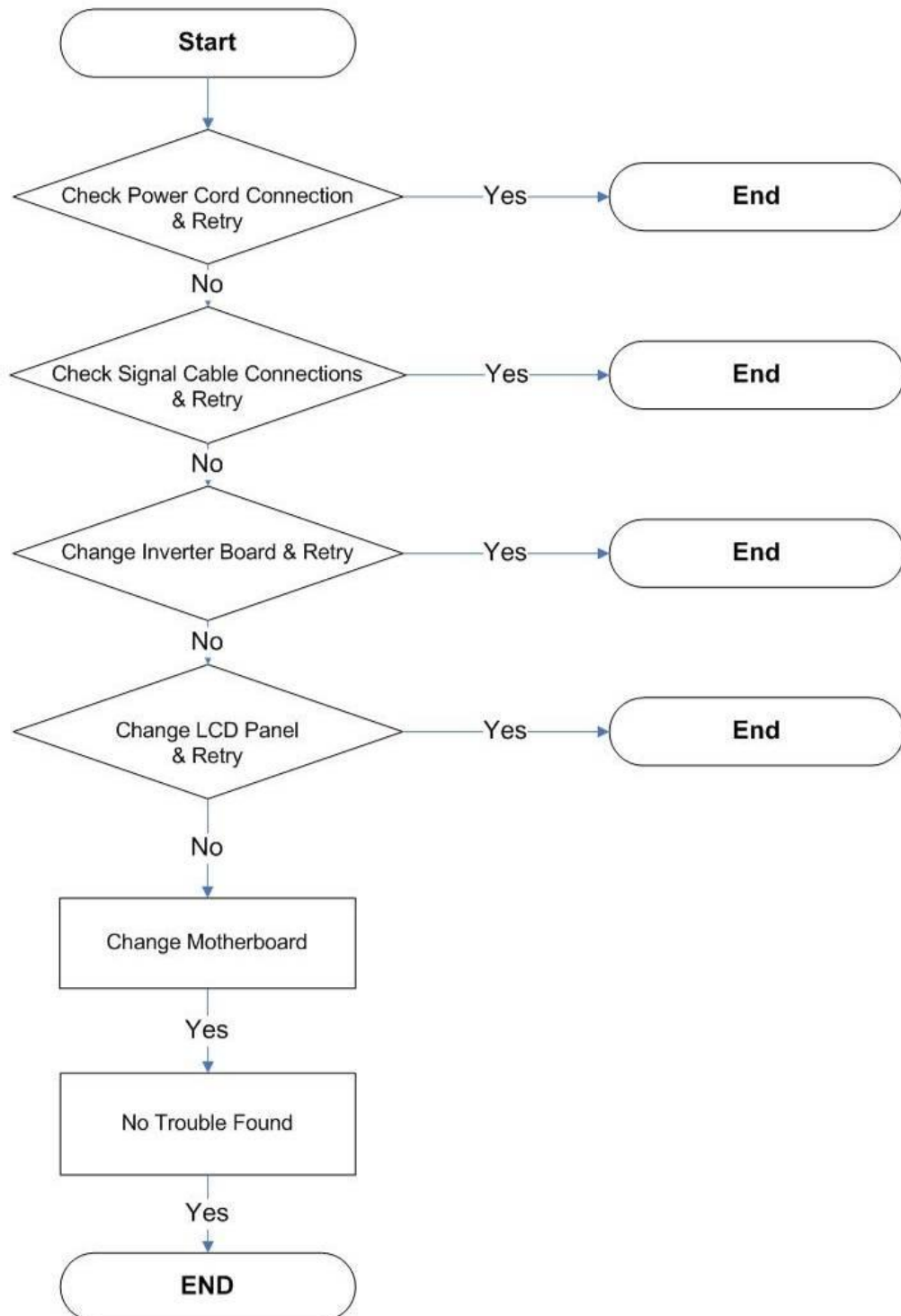


## Power Circuit Troubleshooting

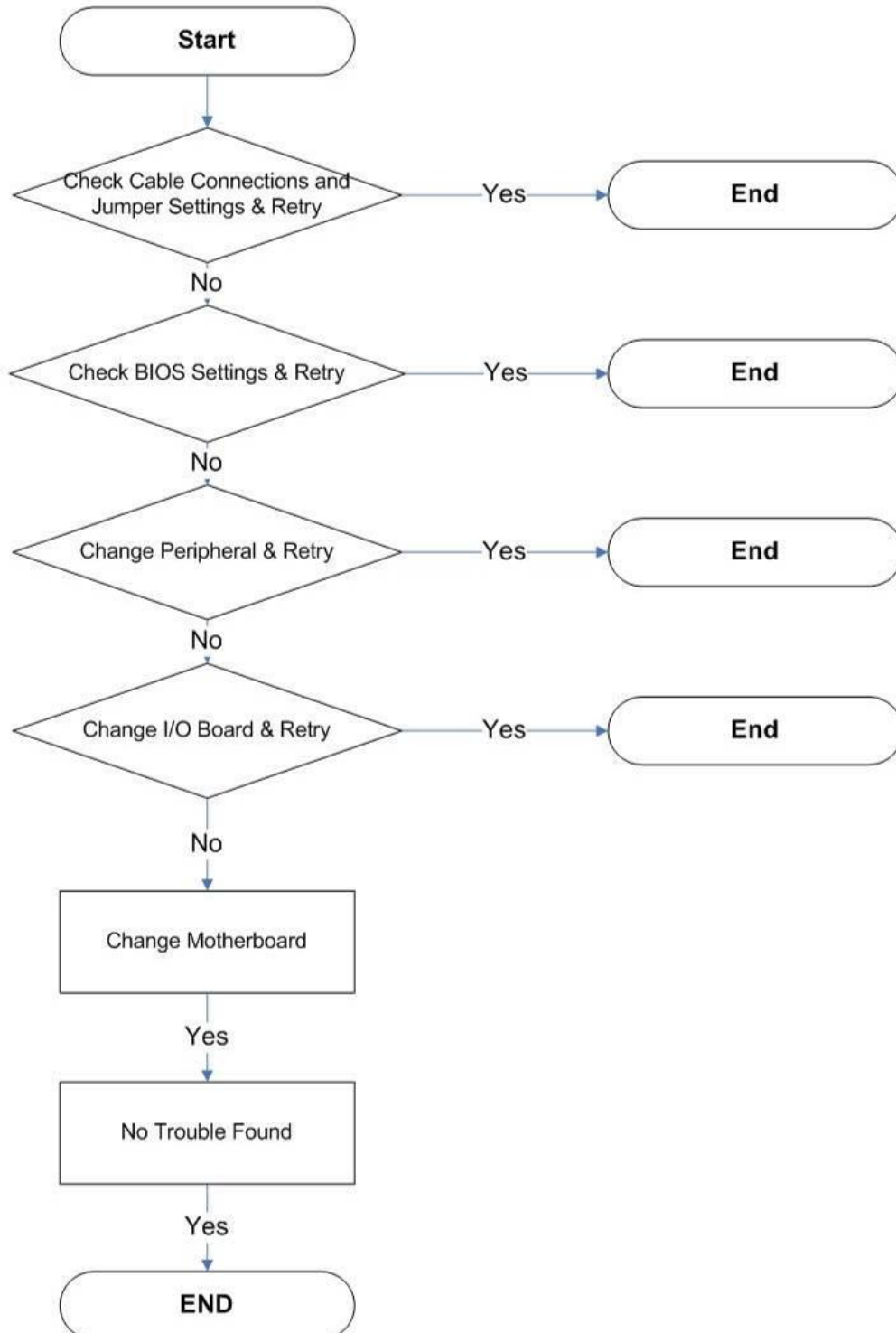




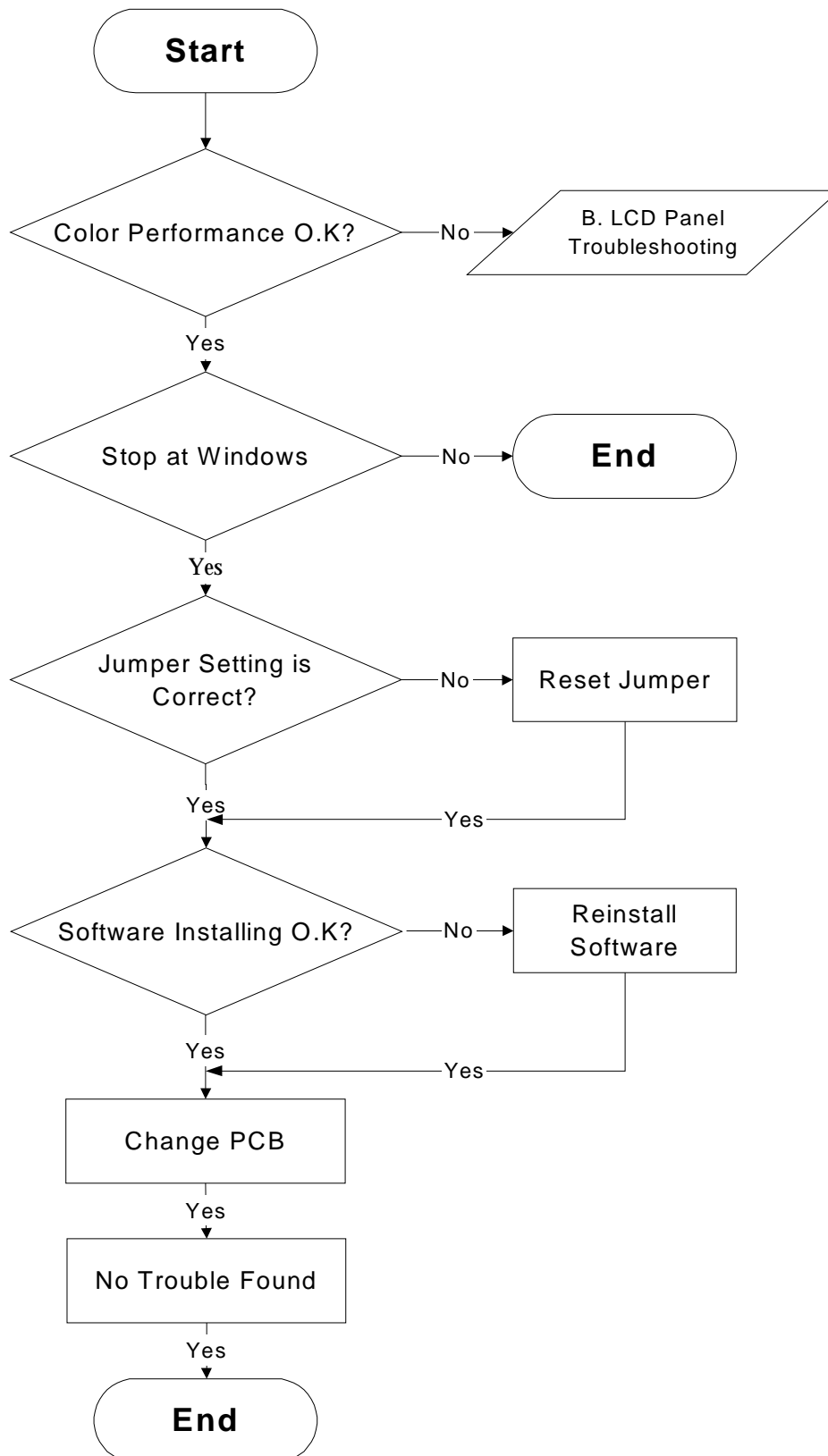
## LCD Panel Troubleshooting



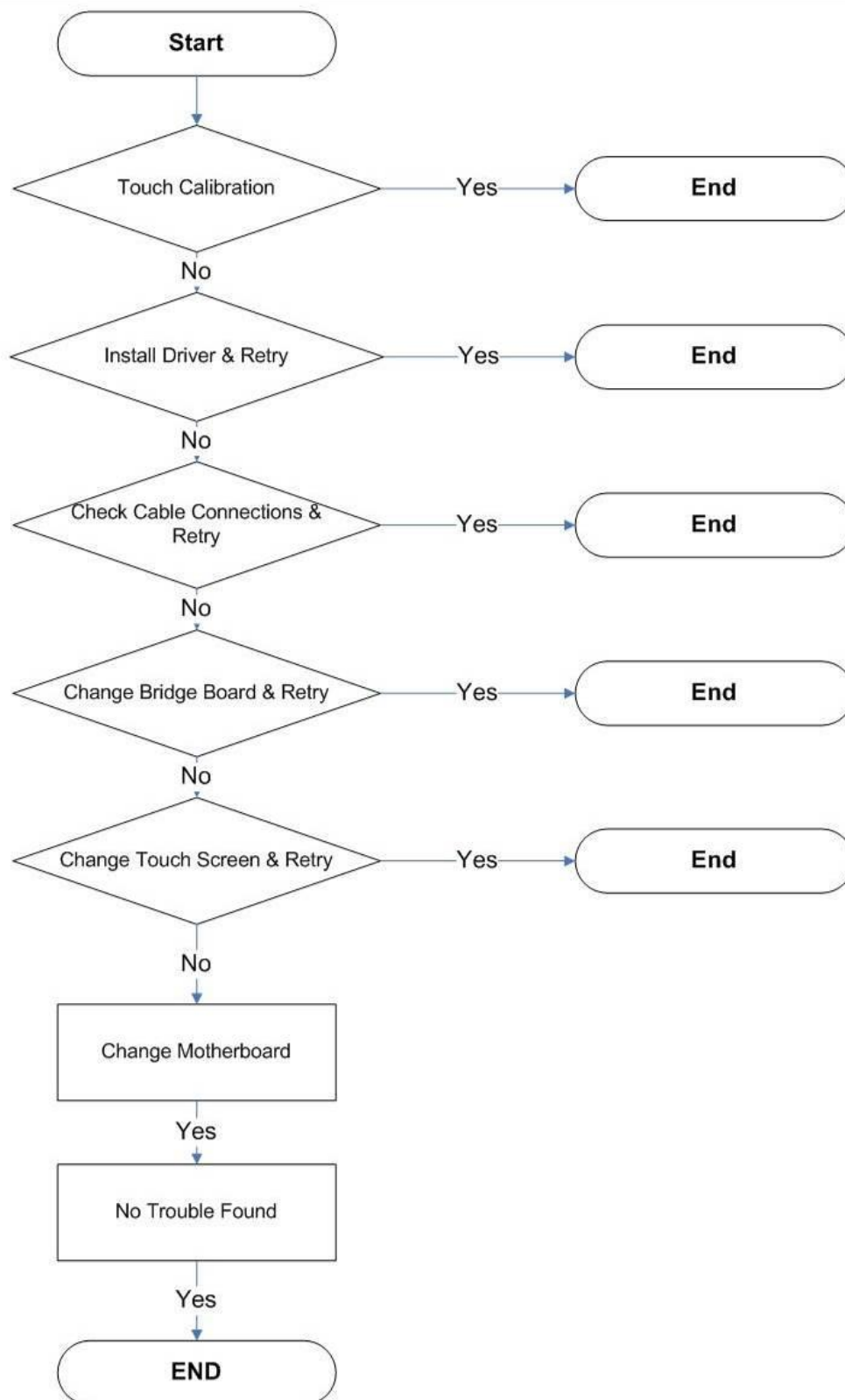
## Peripheral Troubleshooting



## Other Function Troubleshooting



## Touch Screen Troubleshooting



## Appendix A: Specification

Mainboard	Odyssé
Motherboard	B82
Supported CPU	mP478-Pin CPU processors Intel 852GM supports P4/Celeron/Mobile Celeron 1.2G FSB400Mhz CPU
Core Logic	Intel 852GM / ICH4
System Memory	2 x DDR MEMORY 266 up to 1GB
Graphic Memory	Share Memory 8MB-64MB
Mini PCI Socket	1 x Mini PCI socket supported
Flash memory	Compact Flash socket Type I/II supported
Storage Devices	
HDD	2 x 3.5" HDD Drive Bay
ODD	1x Slim CD-ROM/DVD-ROM drive bay
LCD / Touch Panel	
LCD Size	15" TFT
Brightness (nits)	Up to 250 cd/m <sup>2</sup>
Maximal Resolution	1024 x 768
Touch Screen Type	5-wire resistive
Tilt Angle (Degrees)	0°~60°
External I / O Ports	
Front I / O	
USB	2 x USB (1.1/ 2.0)
Rear I / O	
PS / 2	1 x Keyboard
Printer	1 x printer port
Thermal Printer	+24V DC
USB	1 x +12V powered USB, 1 x +24V powered USB (Support 24V max. 2.5A for 24V powered USB or 24V receipt printer )
Serial/COM	4 x powered COM ports (pin 1 / pin 9 support +5V / +12V / standard signal by Jumper)
LAN (10 / 100)	1 x RJ45
Rear I / O	



Cash Drawer	1 x RJ11 (with 12V / 24V)
Audio	1 x Line-in, 1 x Line-out
Power Supply	Internal 180W ATX
Speaker	2x 2w internal speaker
<b>Environmental</b>	
EMC & Safety	FCC / CE Class A, LVD
Operating Temperature	5 °C ~ 35°C
<b>Options</b>	
Magnetic Card Reader	3 Tracks magnetic card reader
Customer Display	VFD customer display, COM4 12V power
Wi- Fi Wireless LAN	Mini PCI 802.11a/b/g wireless LAN
<b>Dimensions</b>	418x361x222 (0° Vertical Display)
<b>(W x D x H) mm</b>	418x381x325 (60° Tilt Display)
<b>(W x D x H) in</b>	16.4 x 14.2 x 8.7 (0° Vertical Display)
	16.4 x 14.9 x 12.7 (60° Tilt Display)

· This specification is subject to change without prior notice.